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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/666,167	09/21/2000	Masayuki Suzuki	09792909-0424	7677

7590 10/28/2004

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EXAMINER

HEALY, BRIAN

ART UNIT PAPER NUMBER

2883

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/666,167

Applicant(s)

SUZUKI, MASAYUKI

Examiner

Brian M. Healy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ²/₁ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-90 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-90 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SD/08)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: REASONS FOR ALLOWANCE.

FOREIGN PRIORITY

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in JAPAN on 09/24/1999. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

REASONS FOR ALLOWANCE AND EX PARTE QUAYLE

The following is an Examiner's Statement of Reasons for Allowance: The closest prior art of record, i.e. Abe et. al., U.S.P. No. 6,380,551 teaches an optical functional device (and method of making same) (Figs.1-11) comprising: a stacked structure 11 which has a series of alternating layers A,B,C,D, of different refractive indices with some of the layers B with a plurality of periodically spaced holes 12 forming a photonic band gap structure including a waveguiding portion 14 that includes sections where the periods have been disrupted so that light of a particular wavelength can be transmitted/filtered in a particular direction. Abe et. al. 551' does not teach or suggest the claimed functional device comprising: a period structure having a periodicity with a unit cycle on the order of a wavelength of an electromagnetic wave (this can be a soundwave wavelength); and means for disturbing the periodicity of the periodicity of the periodic structure with the means being provided in at least one portion of the periodic structure wherein the means for disturbing the periodicity of the periodic structure is externally controllable. In addition, neither Abe or any of the prior art references of record teaches or suggests a wavelength selection light emitting material allowing time setting comprising: a luminous material made luminous due to inter-band

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transition with the luminous material being contained in a periodic structure having a periodicity with a unit cycle on the order of a wavelength of excitation light or emission wavelength; with the wavelength selection light emission material being irradiated from external with excitation light with the luminous material being excited to cause electron transition to an excitation state with the luminous material being made luminous on the basis of a signal. These limitations along with other more detailed limitations are recited in claim 1-90 including the dependent claims are considered to be patentable over Abe and all of the cited references of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning the merits of this communication should be directed to Examiner BRIAN M. HEALY at telephone number (571) 272-2347. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at telephone number (703) 308-0956, to the technical support staff supervisor (Team 2) at telephone number (703) 308-3072, or to the Technology Center 2800 Customer Service Office at telephone number (703) 306-3329.

This application is in condition for allowance except for the following formal matters:

The drawings are missing from this case. Please supply copies of all drawings.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

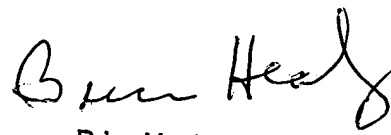
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. Healy whose telephone number is (571)272-2347. The examiner can normally be reached on Compressed Schedule Tues-Thurs. 7AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571)272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Kittaka et. al., U.S. Patent Application Publication No. U.S. 2002/0197042A1 (Figs.1-21), Romagnoli et, al., U.S.Patent Application Publication No. U.S. 2003/0039023A1 (Figs.1-11), Levy, U.S.Patent Application Publication No. U.S. 2004/0080805A1 (Figs.1-15) and Scalora, U.S.P. No. 6,396,617 (Figs.1-19).

Brian M. Healy
Primary Examiner
Art Unit 2883



Brian Healy
Primary Examiner